



DEPARTMENT OF
ECOLOGY
State of Washington

Response to Comments

**Draft Approval Order for Diesel-Powered
Water Heaters for Hanford's Tank Farms**

December 3, 2012 – January 11, 2013

Summary of a public comment period and responses to comments

February 2013
Publication no. 13-05-006

Publication and Contact Information

This publication is available on the Department of Ecology's website at http://bitly.com/nwp_pubs

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- | | |
|---------------------------------------|--------------|
| • Headquarters, Lacey | 360-407-6000 |
| • Northwest Regional Office, Bellevue | 425-649-7000 |
| • Southwest Regional Office, Lacey | 360-407-6300 |
| • Central Regional Office, Yakima | 509-575-2490 |
| • Eastern Regional Office, Spokane | 509-329-3400 |

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Response to Public Comments

Draft Approval Order for Diesel-Powered Water Heaters for Hanford's Tank Farms

December 3, 2012 – January 11, 2013

Department of Ecology
Nuclear Waste Program
3100 Port of Benton Boulevard
Richland, Washington 99354

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Introduction

The Washington State Department of Ecology (Ecology) regulates air pollution sources. Diesel engines are one main source of pollution in our state.

The permittee is the U.S. Department of Energy (USDOE) Office of River Protection. The permit is for USDOE's Hanford site in south-central Washington, north of Richland.

The approval order ensures Hanford's air emissions stay within safe limits that protect people and the environment.

The Response to Comments is the last step before issuing the final permit, and its purpose is to:

- Specify which provisions, if any, of a permit will become effective upon issuance of the final permit, providing reasons for those changes.
- Describe and document public involvement actions.
- List and respond to all significant comments received during the public comment period and any related public hearings.

This Response to Comments is prepared for:

Comment period:	Draft Approval Order for Diesel-Powered Water Heaters for Hanford's Tank Farms
Approval Order:	DE12NWP-003
Draft effective date:	February 11, 2013

To see more information related to the Hanford Site or nuclear waste in Washington, please visit our website: www.ecy.wa.gov/programs/nwp.

Reasons for Issuing the Permit

At the Hanford Site in south-central Washington, USDOE is engaged in a multi-billion-dollar cleanup effort to address the waste resulting from decades of plutonium production. A key activity for that cleanup is to retrieve waste from aging, non-compliant underground single-shell tanks and transfer it to safer double-shell tanks. The tanks are in Hanford's 200 East and West Areas. These areas are near the center of the Hanford Site and are several miles from any agricultural land or residence.

USDOE will use these diesel-powered water heaters to support retrieval of waste from single-shell tanks. USDOE uses the water for sluicing waste (breaking up solidified waste with a high-pressure liquid stream). The water heaters will provide USDOE the water at the right temperature and at the right time.

The current practice is to drive an insulated water tanker truck (diesel) to the site with water that is too hot and to allow water to cool to the right temperature. When the water doesn't cool to the right temperature at the right time, it:

- Slows cleanup.
- Costs more.
- Requires return trips to get more hot water.
- Increases tanker truck emissions (from those extra trips).

Public Involvement Actions

Ecology's Nuclear Waste Program (NWP) encouraged public comment on the proposed decision to permit diesel-powered water heaters during a 40-day public comment period held December 3, 2012, through January 11, 2013.

NWP placed a public announcement legal classified advertisement in the *Tri-City Herald* on December 2, 2012. NWP emailed a notice announcing the start of the comment period to the Hanford-Info email list, which had 1,015 recipients, on December 3, 2012.

NWP notified regional stakeholders via the public involvement calendar on the NWP website and discussed the comment period at a public involvement planning meeting with Hanford stakeholders on October 31, 2012.

The comment period was also posted as an event on Ecology's [Hanford Education & Outreach Facebook page](#).

The public information repositories located in Richland, Spokane, and Seattle, Washington, and Portland, Oregon, received the following:

- Public notice.
- Transmittal letter.
- Draft approval order, conditions, and restrictions.

The following public notices for this comment period are in Appendix A of this document:
Public notices for this comment period:

1. Public notice (print publication that is available on the [Nuclear Waste Program website](#)).
2. Classified advertisement in the *Tri-City Herald*.
3. Notice sent to the [Hanford-Info email list](#).
4. Event posted on Ecology's [Hanford Education & Outreach Facebook page](#).

Response to Comments & Commenter Index

Ecology accepted comments from December 3, 2012, until January 11, 2013. Three people submitted comments. No members of the public requested a meeting. This section summarizes the comments that we received during the public comment period and our response ([RCW 34.05.325\(6\)\(a\)\(iii\)](#)).

All three comments all came via email, and all comments were related to using solar energy rather than diesel fuel to power the water heaters. Appendix B shows the comment verbatim.

Commenter index:

1. Troy Woody, Silk Road Solar
2. Wes Marcum
3. Ray Lam, Silk Road Solar

Ecology's response:

USDOE considered using solar energy but ruled it out because it would not be practical. First, the system needs to be portable to reach all tanks from which waste is to be removed. Second, the heaters must raise the water temperature to 90°F. Waste removal requires water flow of 100 gallons per minute, and around 40,000 300-watt solar panels would be needed to create such a flow.

While solar-water-heater technology has improved and costs are falling, solar is not yet competitive with diesel for this application. But Ecology appreciates the public's requests to consider renewable energy sources to power Hanford cleanup.

Appendix A: Copies of all public notices

Public notices for this comment period:

1. Public notice (print publication that is available on the [Nuclear Waste Program website](#)).
2. Classified advertisement in the *Tri-City Herald*.
3. Notice sent to the [Hanford-Info email list](#).
4. Event posted on Ecology's [Hanford Education & Outreach Facebook page](#).

Public Comment Period



Nuclear Waste Program

December 2012

Draft Approval Order for Diesel-Powered Water Heaters for Hanford's Tank Farms

The Washington Department of Ecology has received a Notice of Construction Application for direct-fired diesel water heaters in Hanford's 200 East and West Areas. These areas are near the center of the Hanford Site, and are several miles from any farm or residence.

U.S. Department of Energy (USDOE) wants these water heaters to support retrieval of waste from underground single-shell tanks. USDOE uses the water for sluicing waste (breaking up solidified waste with high-pressure liquid stream). The water heaters will give USDOE the water at the right temperature and at the right time.

The current practice is to drive an insulated water tanker truck (diesel) to the site with water that's too hot, and to allow water to cool to the right temperature. When the water doesn't cool to the right temperature at the right time, it:

- Slows cleanup.
- Costs more.
- Requires return trips to get more hot water.
- Increases tanker truck emissions (from those extra trips).

Impact to the environment

The diesel combustion gases (exhaust) discharge through a stack with stainless steel rings that water flows over. This transfers the heat and some of the emissions from the exhaust to the water. The water is collected and stored in a tank at the bottom of the unit until needed.

Emissions are limited because most are captured in the water and the generator does not operate for long periods because there is limited space in the tanks for the addition of water.

WHY IT MATTERS

The permit ensures Hanford's air emissions stay within safe limits that protect people and the environment.

PUBLIC COMMENT PERIOD

December 3, 2012 – January 11, 2013

TO SUBMIT COMMENTS

Send comments or questions by e-mail (preferred), U.S. mail, or hand deliver them to:

Philip Gent
3100 Port of Benton Blvd.
Richland, WA 99354
Hanford@ecy.wa.gov

PUBLIC HEARING

A public hearing is not scheduled, but if there is enough interest, we will consider holding one. To request a hearing or for more information, contact:

Madeleine Brown
800-321-2008
Hanford@ecy.wa.gov

SPECIAL ACCOMMODATIONS

If you require special accommodations or need this document in a version for the visually impaired, call the Nuclear Waste Program at 509-372-7950.

Persons with hearing loss, call 711 for Washington Relay Service. Persons with a speech disability, call 877-833-6341.

Figure 1. Public notice, page 1 of 2.

Public Comment Period

Nuclear Waste Program

December 2012

Public Information Repositories

Richland

Ecology's Nuclear Waste Program
Resource Center
3100 Port of Benton Boulevard
Richland, WA 99354
Contact: Valarie Peery 509-372-7950

U.S. Department of Energy Administrative
Record
2440 Stevens Drive, Room 1101
Richland, WA 99354
Contact: Heather Childers 509-376-2530

U.S. Department of Energy Reading
Room
2770 Crimson Way, Room 101L
Richland, WA 99354
Contact: Janice Parthree 509-372-7443
Janice.Parthree@pnnl.gov

Portland

Portland State University
Branford Price Millar Library
1875 SW Park Avenue
Portland, OR 97207
Contact: Claudia Weston 503-725-4542
Weston@pdx.edu

Seattle

University of WA Suzzallo Library
P.O. Box 352900
Seattle, WA 98195
Contact: Hilary Reinert 206-543-4664
Reinert@uw.edu

Spokane

Gonzaga University Foley Center
502 E Boone Avenue
Spokane, WA 99258
Contact: John S. Spencer 509-323-6110
spencer@gonzaga.edu

Online

www.ecy.wa.gov/programs/nwp/comment/periods.htm

The emissions from the diesel generators are not significant enough to require a public comment period. Ecology is holding one because a number of people asked for a comment period for a recent and similar request to increase air emissions.

Air pollution regulations

Ecology follows [Washington Administrative Code 173-400](#), *General regulations for air pollution sources*, to process USDOE's application for the water heaters.

The section that covers how we conduct this public comment period is [WAC 173-400-171](#). It outlines when, where, and how we notify the public and provide the proposal for review.

Permittee/site owner

U.S. Department of Energy
Office of River Protection
P.O. Box 450
Richland, WA 99352

Information for public review

Ecology invites you to review and comment on the documents that inform our decision to approve these water heaters. They are online and at locations listed in the box to the left:

- [Permit application.](#)
- [Draft approval order, conditions, and restrictions.](#)

Tri-City Herald

tricityherald.com
VOICE OF THE MID-COLUMBIA

Classified Legals

Draft Approval Order for Diesel-Powered Water Heaters for Hanford's tank farms

The Washington Department of Ecology has received a Notice of Construction Application for direct-fired diesel water heaters in Hanford's 200 East and West Areas. These areas are near the center of the Hanford Site, and are several miles from any farm or residence.

The public comment period is December 3, 2012, through January 11, 2013.

U.S. Department of Energy (USDOE) wants these water heaters to support retrieval of waste from underground single-shell tanks. USDOE uses the water for sludging waste (breaking up solidified waste with high-pressure liquid stream). The water heaters will give USDOE the water at the right temperature and at the right time.

The current practice is to drive an insulated water tanker truck (diesel) to the site with water that's too hot, and to allow water to cool to the right temperature. When the water doesn't cool to the right temperature at the right time, it:

Slows cleanup.
Costs more. Requires return trips to get more hot water.
Increases tanker truck emissions (from those extra trips).

Impact to the environment
The diesel combustion gases (exhaust) discharge through a stack with stainless steel rings that water flows over. This transfers the heat and some of the emissions from the exhaust to the water. The water is collected and stored in a tank at the bottom of the unit until needed. Emissions are limited because most are captured in the water and the generator does not operate for long periods because there is limited space in the tanks for the addition of water.

The emissions from the diesel generators are not significant enough to require a public comment period. Ecology is holding one because a number of people asked for a comment period for a recent and similar request to increase air emissions.

WHY IT MATTERS

The permit ensures Hanford's air emissions stay within safe limits that protect people and the environment.

TO SUBMIT COMMENTS

Send comments or questions by e-mail (preferred), U.S. mail, or hand deliver them to:

Phil Gent
3100 Port of Benton Blvd.
Richland, WA
99354 Hanford@ecy.wa.gov

PUBLIC HEARING

A public hearing is not scheduled, but if there is enough interest, we will consider holding one. To request a hearing or for more information, contact:

Madeleine Brown
509-372-7936
Hanford@ecy.wa.gov

Or, call the Hanford Cleanup Line at 800-321-2008.

Air Pollution Regulations
Ecology follows Washington Administrative Code 173-400. General regulations for air pollution sources, to process USDOE's application for the water heaters.

The section that covers how we conduct this public comment period is WAC 173-400-171. It outlines when, where, and how we notify the public and provide the proposal for review.

Permittee/Site Owner
U.S. Department of Energy
Office of River Protection
P.O. Box 450
Richland, WA 99352
Information for public review

Ecology invites you to review and comment on the documents that inform our decision to approve these water heaters. They are online, and at locations listed below.

Permit application.
Draft approval order, conditions, and restrictions.

Document Review Locations

Richland
Ecology's Nuclear Waste Program Resource Center
3100 Port of Benton Blvd.
Richland, WA 99354
Contact: Valarie Peery
509-372-7950

Dept. of Energy Administrative Record
2440 Stevens Drive, Room 1101
Richland, WA 99354
Contact: Heather Childers
509-378-2530

Department of Energy Reading Room
2770 Crimson Way, Room 101L
Richland, WA 99354
Contact: Janice Parthre
509-372-7443
Janice.Parthre@pnmt.gov

Portland
Portland State University
Branford Price Miller Library
1875 SW Park Avenue
Portland, OR 97207
Contact: Claudia Weston
503-725-4542
Weston@pdx.edu

Seattle
University of WA Suzzallo Library
P.O. Box 352900
Seattle, WA 98195
Contact: Hilary Reinert
206-543-4864
Reinert@uw.edu

Spokane
Gonzaga University Foley Center
502 E Boone Avenue
Spokane, WA 99258
Contact: John S. Spencer
509-323-6110
spencer@gonzaga.edu

Online
www.ecy.wa.gov/programs/nwp/commentperiods.htm
12-4845, 12/2/2012

Figure 2. Classified advertisement in the *Tri-City Herald* on December 2, 2012.

----- Original message -----

Subject: Two comment periods start today

From: "Brown, Madeleine (ECY)" <mabr461@ECY.WA.GOV>

To: HANFORD-INFO@LISTSERV.WA.GOV

CC:

This is a message from the Washington Department of Ecology

2 comment periods start today

Today Ecology is starting comment periods for two air quality decisions.

The reissue comment period runs through January 4, 2013. A comment period for this permit was also held June 4 – August 3, 2012. The only change from then to now is that Ecology is making the permit application, its supplement, and supporting material available. The public notice is attached. You can find all the information about this permit by visiting the [Nuclear Waste Program's comment period web page](#).

Diesel-powered water heaters for Hanford's tank farm retrieval work – This comment period runs through January 11, 2013. US Department of Energy Office of River Protection wants these water heaters so they will have the right temperature water to support waste retrieval from Hanford's single-shell tanks. This action does not meet the threshold for a comment period because the emissions are low. Ecology is holding the comment periods because of public interest in a similar change in Hanford's air emission limits. The public notice is attached. You can find the materials for this proposal by visiting the [Nuclear Waste Program's comment period web page](#).

Contact Hanford@ecy.wa.gov if you have questions, or to submit comments.

Figure 3. Notice sent to the Hanford-Info email list.

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Ecology's Hanford Education...

Home

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Public Comment Period: Draft Approval Order ...

See More

Public Event · By Ecology's Hanford Education & Outreach Network

Friday, January 11, 2013

What time?

The Department of Ecology is proposing a change to the Hanford Site Air Operating Permit to include a new diesel-powered water heaters in Hanford's 200 East and West areas. The U.S. Department of Energy (USDOE) needs the water heaters to support retrieval of waste from single-shell underground tanks. USDOE will use the water for sluicing waste (breaking up solidified waste with high-pressure liquid stream). The water heaters will give USDOE the water at the right temperature and at the right time. The Department of Ecology invites you to comment on this proposal from 12/3/12 to 1/11/13.

Submit written comments by January 11 to :
Philip Gent (hanford@ecy.wa.gov)
3100 Port of Benton Blvd
Richland, WA 99354

More information: <http://www.ecy.wa.gov/programs/nwp/commentperiods.htm>

The full permit is also available for viewing at the Richland Ecology office (address above) and the Hanford Public Information Repositories.

Ecology's Hanford Education & Outrea...

3100 Port of Benton Blvd., Richland, Washington 99...

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Ecology's Hanford Education & Outreach Network created the event.

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Public Comment Period: Draft Approval Order for Diesel-Powered Water Heaters for Hanford's Tank Farms

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The Department of Ecology is proposing a change to the Hanford Site Air Operating Permit to include...

Join · 0 people are going

Promote

Figure 4. Event posted on Ecology's Hanford Education & Outreach Facebook page.

Appendix B: Copies of all written comments

From: Troy Woody
Sent: Tuesday, December 04, 2012 6:10:48 AM (UTC-08:00) Pacific Time (US & Canada)
To: Hanford (ECY)
Subject: Diesel Emissions

Suggest looking at replacing heat required w/ clean sustainable solar thermal.

We are a minority owned local business that produces solar thermal hot water panels at 1/3 of the cost of any competitor making them affordable.

Love to have discussion with someone this would have a dramatic effect on lowering the emissions.

--

Troy Woody
Silk Road Solar
509-460-0720
moto@silkroadenvironmental.com

From: WES DEE DEE MARCUM

Sent: Saturday, December 08, 2012 11:10:24 AM (UTC-08:00) Pacific Time (US & Canada)

To: Hanford (ECY)

Subject: Deisel Generator Alternative

Dear Philip Gent:

I'm reading the update on the Hanford project that would utilize deisel generator power to heat hot water.

I would like to suggest an alternate sustainable option to deisel, that would be solar hot water. I live in Walla Walla and have seen solar hot water as a very effective sustainable alternative to all other heating options. In fact, I happen to run the Washington State Pennatentiary Correctional Industries division of the prison where we have partnered with a local company right out of your own Tri-Cities area. Our production shops are manufacturing a Wa. made solar hot water unit that we hope to promote to our Governor Elect Enslee this coming Earth Day.

I believe you would be very impressed with the sustainable practice of a solar hot water alternative to the deisel proposal.

Please feel free to contact myself any time for further education on this Wa. made product availability.

Best regards!

Wes Marcum
509.526.6483 o

From: Ray Lam

Sent: Monday, December 03, 2012 7:59:49 PM (UTC-08:00) Pacific Time (US & Canada)

To: Hanford (ECY)

Subject: Comment on diesel water heaters

Has Hanford looked at solar hot water heaters? Why would a DOE site look at burning fossil fuel if a carbon emission alternative is available?

Solar hot water heaters are used in many industries in the Tricities area, and one is even locally manufactured in Walla Walla.

The cost of diesel, plus the hazardous waste if diesel spills, and the ability to help the local, green economy, should make this a top consideration as an alternative.

Sincerely

Ray Lam

President

Silk Road Solar

509-460-3012